

Remarks

Claims 62-95 remain in the application. Claims 1-61, standing withdrawn as being drawn to a non-elected invention, have been cancelled, but this does not indicate that the invention of these claims has been abandoned or that the intent to pursue patent protection on this invention has been abandoned.

Claim 1 has been amended to more particularly point out the composition and properties of the invention. Basis for the compositional amendments can be found in the specification at page 2, lines 5-6, 10-11 and page 5, lines 14-15. The basis for the Tabor stiffness limitation is found on page 2, lines 16-17.

Applicant believes the Examiner should enter this amendment because:

1. The amendments place the claims in better condition for allowance or for appeal to the Board of Appeals.
2. The Examiner added a new reference and a new rejection that was not necessitated by applicants' amendment. The new reference was added and the new rejection made to reject claims requiring a phosphanate be present in the mat – those claims were original claims.
3. The amendments would not necessitate substantial new searching since the limitations added, except for the Tabor stiffness, have been discussed before, or more restrictive limitations were in original dependent claims.

The present invention are mats having a smooth surface, an excellent and unexpected flame resistance, the mat passing the National Fire Protection Association's (NFPA) Method #701 Flammability Test and other requirements required for a facer for ceiling tiles of the type disclosed in the specification. As pointed out in the specification at page 2, lines 10-21, these mat properties are unique and unexpected in nonwoven mats containing a majority of glass fibers bound together with an organic binder. Such properties are very important to using non-woven mats on ceiling panels and other specialty products.

Claims 62-73, 75-81, 83-89, 91-92 and 94-95 were rejected under 35 USC 103 as being unpatentable over Kajander in view of Arkens et al. The Examiner stated that Kajander teaches nonwoven mats containing 25-75 wt. percent glass fibers bound together with 15-75 wt. percent of a resin binder, but not the type of binder used in the invention. The Examiner also stated that Arkens et al teaches a fiber glass nonwoven mat containing a type of binder of the type used in the invention and urges that it would have been obvious to have used the Arkens et al binder in the mats taught by Kajander instead of the binder taught by Kajander because both patents teach making nonwoven mats of fibers bound with a resin binder.

Kajander teaches that prior art nonwoven mats did not provide the bonding strength needed for bonding to wood products, see col. 1, lines 65-67. Kajander teaches how to make nonwoven mats that do bond well to wood, and the reason that they bond good to wood is because of the formaldehyde binders used in the nonwoven mats and that the formaldehyde containing resins are only partially cured, i. e. "B" staged. Arken et al do not teach or remotely suggest that their binders bond well to wood, or that if "B" staged that they would cause a nonwoven fiber glass mat to bond well to wood, see col. 8, lines 61-67. Without such teachings there would be no incentive or obvious reason to modify Kajander by removing binders that Kajander taught bonded good to wood when cured to a B stage and replace it/them with a binder taught by Arkens et al whose wood bonding qualities or B stage properties are unknown. There are a plethora of resins and binders that conceivably be used to bond glass fibers together in a nonwoven mat, but it is was not obvious, when applicants set out to make a mat suitable for a facer mat for the special types of ceiling tiles disclosed, fiberglass, and special fiber glass, to have selected the parameters found necessary in the present claims. Also, Kajander does not teach or reasonably suggest using his mats as a facer for ceiling tiles of the type applicant disclosed, and neither does Arken et al suggest modifying Kajander to make such mats. This rejection, without such teachings or reasonable suggestions, is simply a hindsight reconstruction using applicants' own disclosure. Such rejections are not proper, e.g. see "improper to use Applicants' own disclosure as a roadmap to piece bits and pieces of non-related patents together with hindsight reconstruction to reject the claims under 35 USC 103, see American Medical Systems, Inc. v. Medical Engineering Corp., 26 USPQ 2d 1081, 1091, 1992, or as an instruction manual or template to piece together teachings of prior art to render the claims obvious, see In re Fritch, 23 USPQ 2d 1780, 1783, 1992. Economy of production is as valid a basis for invention as foresight in

disclosure of new means and an answer to a long felt want is a valid signpost of invention, see *Kaynar Company et al v. The I. Leon Co., Inc.*, 128 USPQ 25, 27-28, 1960.

Also, in addition to showing that some elements of applicants' invention are known, even as here, in a broad sense, the Examiner must still provide evidence of why it would be obvious for one of ordinary skill to combine the teachings together in the manner of the claimed invention to achieve applicants' claimed invention. It is not enough to merely show that both references relate to a common area of art, there must be a reasonable basis for holding it would have been obvious to one of ordinary skill to have modified the teachings of the two references to obtain the claimed invention.

Further, neither reference teaches that the nonwoven mats disclosed in the references have excellent and unexpected flame resistance and flex and recovery properties after scoring and folding, nor does Arkens et al reasonably suggest that their mats would pass the National Fire Protection Association's (NFPA) Method #701 Flammability Test. Arkens et al teach that their mats are heat resistant, but are silent regarding the flame resistance of their mats. Heat resistant does not mean that the mats are flame resistant or that they would pass the NFPA test.

The Examiner urges that if an obvious nonwoven mat composition meets all of the composition parameters of the claimed mats, a property required of the claimed mats is also an inherent property of the obvious nonwoven mat. This is not accurate because when the claim requires, in addition to the compositional ranges, that the resultant mat has certain properties, that is also a compositional requirement. The issue here is not the exact composition, but rather those compositions that produce the properties that meet the requirements needed for a facer for certain types of ceiling tiles.

The Examiner urges that Kajander is concerned with reducing the levels of VOC emissions produced from formaldehyde in the production of FG mats, but there is no evidence of that beyond Kajander stating that he preferred to use furfuryl formaldehyde as a binder because it was easy to "B" stage, contained reduced levels of VOC, had zero phenol content and was stable in storage, but that was a reason for preferring furfuryl formaldehyde, not a requirement for the binder – note that Kajander also used phenol formaldehyde resole, melamine formaldehyde and similar resins, but one of ordinary skill

in the art would not consider the resins taught by Arkens, et al to be a "similar resin" to these.

For these reasons, Applicants believe that the claims are patentable under 35 USC 103 and respectfully requests the Examiner to withdraw this rejection and to allow all of the claims.

Claims 62-95 were rejected under 35 USC 103 as being unpatentable over Jaffee in view of Arkens et al. The Examiner stated that Jaffee et al teaches nonwoven mats containing 70-85 wt. percent glass fibers bound together with 15-30 wt. percent of an acrylic resin binder, but not the type of binder used in the invention. The Examiner also stated that Arkens et al teaches a fiber glass nonwoven mat containing a type of binder of the type used in the invention and urges that it would have been obvious to have used the Arkens et al binder in the mats taught by Jaffee et al instead of the binder taught by Jaffee et al because both patents teach making nonwoven mats of fibers bound with a resin binder.

This rejection and its basis is respectfully traversed. Jaffee et al teach that prior art nonwoven mats did not provide the bonding strength, resistance to humidity, and low cost needed for an optimum nonwoven facer for bonding to foam, see col. 1, lines 16-53. Jaffee et al teach how to make nonwoven mats that do bond well to foam, and the reason that they bond good to foam is because of most of the fibers being in bundles in the mat and the acrylic resin, having a glass transition temperature exceeding 45 degrees C., is cured to only a "B" stage. Arken et al do not teach or remotely suggest that their binders bond well to foam, that their binders have a glass transition temperature exceeding 45 degrees C., or that they that if "B" staged that they would cause a nonwoven fiber glass mat to bond well to foam, see col. 8, lines 61-67. Without such teachings there would be no incentive or obvious reason to modify Jaffee et al by removing binders that Jaffee et al taught bonded good to foam when cured to a B stage and replace it/them with a binder taught by Arkens et al whose glass transition temperature is unknown and whose foam bonding qualities or B stage properties are unknown.

There are a plethora of resins and binders that could conceivably be used to bond glass fibers together in a nonwoven mat, but it is was not obvious, when applicants set out to make a mat suitable for a facer mat for the special types of ceiling tiles disclosed, fiberglass, and special fiber glass, to have selected the parameters found necessary in

the present claims. Also, Jaffee et al does not teach or reasonably suggest using his mats as a facer for ceiling tiles of the type disclosed by applicant, and neither does Arken et al suggest modifying Jaffee et al to make such nonwoven facers. This rejection, without such teachings or reasonable suggestions, is simply a hindsight reconstruction using applicants' own disclosure. Such rejections are not proper, e.g. see "improper to use Applicants' own disclosure as a roadmap to piece bits and pieces of non-related patents together with hindsight reconstruction to reject the claims under 35 USC 103, see American Medical Systems, Inc. v. Medical Engineering Corp., 26 USPQ 2d 1081, 1091, 1992, or as an instruction manual or template to piece together teachings of prior art to render the claims obvious, see In re Fritch, 23 USPQ 2d 1780, 1783, 1992. Economy of production is as valid a basis for invention as foresight in disclosure of new means and an answer to a long felt want is a valid signpost of invention, see Kaynar Company et al v. The I. Leon Co., Inc., 128 USPQ 25, 27-28, 1960.

Also, in addition to showing that some elements of applicants' invention are known, even as here, in a broad sense, the Examiner must still provide evidence of why it would be obvious for one of ordinary skill to combine the teachings together in the manner of the claimed invention to achieve applicants' claimed invention. It is not enough to merely show that both references relate to a common area of art, there must be a reasonable basis for holding it would have been obvious to one of ordinary skill to have modified the teachings of the two references to obtain the claimed invention.

Further, neither reference teaches that the nonwoven mats disclosed in the references have excellent and unexpected flame resistance, nor does Arkens et al reasonably suggest that their mats would pass the National Fire Protection Association's (NFPA) Method #701 Flammability Test. Arkens et al teach that their mats are heat resistant, but are silent regarding the flame resistance of their mats. Heat resistant does not mean that the mats are flame resistant or that they would pass the NFPA test #701.

The Examiner urges that if an obvious nonwoven mat composition meets all of the composition parameters of the claimed mats, a property required of the claimed mats is also an inherent property of the obvious nonwoven mat. This is not accurate because when the claim requires, in addition to the compositional ranges, that the resultant mat has certain properties, that is also a compositional requirement. The issue here is not

the exact composition, but rather those compositions that have the properties that meet the requirements needed for a facer for certain types of ceiling tiles.

The Examiner urges that since both Jaffee et al and Arkens et al involve fiber glass nonwoven mats that is enough to make it obvious to combine the references. That is not a proper basis for establishing obviousness. A Peterbuilt truck and a Mini-Cooper are both motor vehicles, but that is not enough to make it obvious to put a Peterbuilt transmission in a Mini-Cooper. There has to be a reasonable basis for why one of ordinary skill would want to combine the teachings of the references including a reasonable expectation of achieving his objective. Those critical elements of obviousness are not present with just the two references of Jaffee et al and Arkens et al.

Finally, claims 85-89, 91, 92, 94 and 95 require a hydrophilic material on at least a portion of the surface of the mat and the Examiner does not point out where this is taught or is obvious to one of ordinary skill in the art.

For these reasons, Applicants believe that the claims are patentable and respectfully requests the Examiner to withdraw this rejection and to allow all of the claims.

Claims 74, 82, 90 and 93 were rejected under 35 USC 103 as being unpatentable over Jaffee et al or Kajander in view of Arkens et al for the reasons given above in the rejections and further in view of Black. The Examiner urges that Black teaches compositions imparting flame retardant properties to fabrics from synthetic polymer fibers and teaches the use of cyclic organic phosphate for such purpose and that it would have been obvious to have used an organic phosphate as a flame retardant additive, motivated by the desire of providing the fibers with flame retardant properties. This rejection is respectfully traversed. This is another example of an improper hindsight reconstruction of applicants' invention. Black does not involve a fibrous nonwoven mat bonded with a resin binder or to a product having good bonding properties for wood or foam. Instead, Black is working with woven fabrics of cellulosic and synthetic polymer fibers and does not involve interaction with heat curable resins, see lines 53-55 of page 3, or the effects of Black's compositions on the properties of fibrous mats depending upon such resins and their heat cured bonding for properties critical for use on either wood or foam bonding strength or on the properties necessary for use on the ceiling tiles disclosed herein. For these reasons applicants believe that one of ordinary skill in the art

would not look to Black in their efforts to develop a suitable facer for the ceiling tiles or find in Black the suggestion to use an organic phosphonate with the resins taught by Arkens et al. Applicants respectfully request the Examiner to withdraw this rejection and allow all of the claims.

Claims 62-95 were rejected under the nonstatutory double patenting doctrine because of the claims in pending patent application Serial No. 10/718,007 in view of Geel. The Examiner states that the claims of this application fail to include polymer fibers in the nonwoven mat, but that because of the teachings of Geel it would have been obvious to have included polymer fibers in the invention of the other pending application. A terminal disclaimer is enclosed stating that any patent issuing from these claims will expire no later than the expiration date of any patent issuing from application serial number 10/718,007. This terminal disclaimer should overcome this rejection.

Applicants believe that the claims are now in condition for allowance, but if the Examiner believes one or more issues still exist, to expedite disposal of this application the Examiner is respectfully invited to call Applicants' attorney at the number listed below to discuss the issue or issues and a way of removing.

Respectfully submitted,


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